STO-20355315-T-E1

Coaxial VNA Frequency Extender, Transmit (Tx/Ref) Module, 5 to 13.75 GHz Input

STO-20355315-T-E1 is a compact coaxial vector network analyzer (VNA) frequency extender transmit (Tx/Ref) module that extends lower frequency VNA signals to 20 to 55 GHz. It is compatible with modern vector network analyzers such as Rohde & Schwarz ZNA, Anritsu VectorStar™, Keysight PNA-X Series, and Copper Mountain CobaltFx. The VNA needs dual sources to be extended. This frequency extender, when paired with compatible receiver, can achieve a dynamic range up to 120 dB and can be used to measure one-path transmission (S21 or S12) through DUT. An AC to DC Power adapter is included. The Eravant calibration kit (**STQ-TO-VFVM-U3-CKIT1**) and **Wave-Glide™ Rail System (STQ-TL-RW-S10-M1)** are highly recommended to complete the V-Band VNA test set. VNA extender is packaged individually in a rugged equipment box with additional hardware and tools.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	20 GHz		55 GHz
Test Port Output Power		+15 dBm	
Dynamic Range* @ 10 Hz BW	100 dB	120 dB	
Test Port Match		10 dB	
RF Source Input Frequency	5 GHz		13.75 GHz
RF Source Input Power	-6 dBm	-3 dBm	0 dBm
LO Source Input Frequency (RF±IF)	5 GHz		13.75 GHz
LO Source Input Power	-6 dBm	-3 dBm	0 dBm
IF Frequency Range	10 MHz		1000 MHz
Multiplication Factor		4	
Specification Temperature	+20°C		+30°C
Operating Temperature	0°C		+50°C

***Measured with compatible Rx module**

ECCN

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FEATURES

- Dynamic Range of 120 dB
- AC Power Input: 100 to 240 VAC

APPLICATIONS

- VNA Frequency Extension
- OTA Measurements
- Test Lab Instrumentation

Recommended Pairing

- Cal Kit: STQ-TO-VFVM-U3-CKIT1
- Waveguide-Glide™ Rail System
- Cable: SCW-SMSM040-F1-A-PM

Recommended Pairing

- VNA Extender Configuration Guide
- VNA Extenders and Cal Kits

Mechanical Specifications:

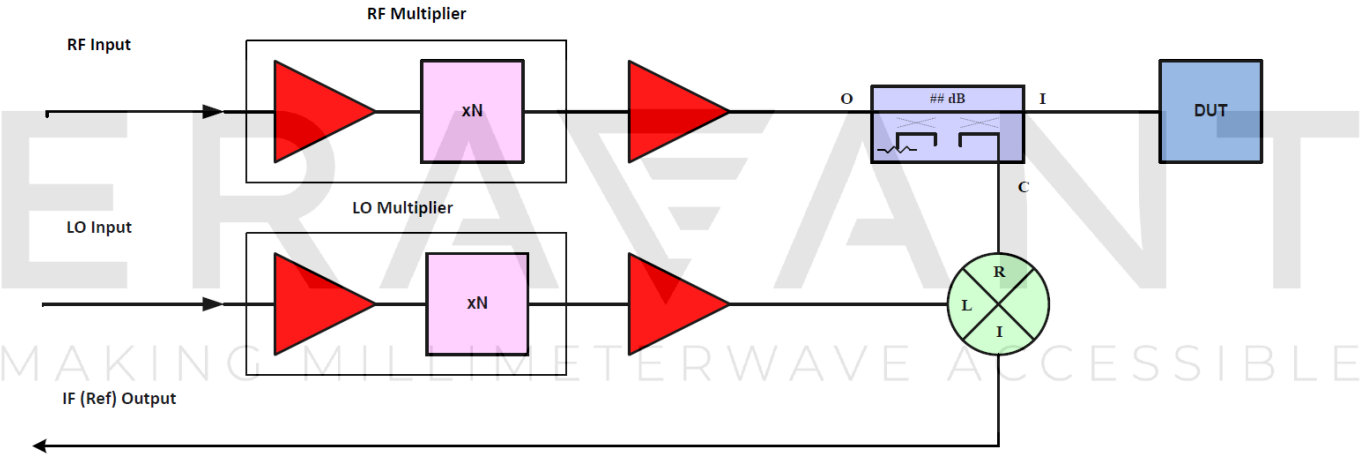
Item	Specification
Test Port	1.85 mm (F)
RF and LO Source Input Ports	SMA (F)
IF Reference Port	SMA (F)
DC Power Receptacle	LEMO EGG.0B.304.CLL
Finish	Black Anodized
Weight (Per Module)	2.1 lbs.
Size (Without Adjustable Feet)	5.00” (L) x 3.75” (W) x 1.90” (H)
Outline	TO-TC

Included Components:

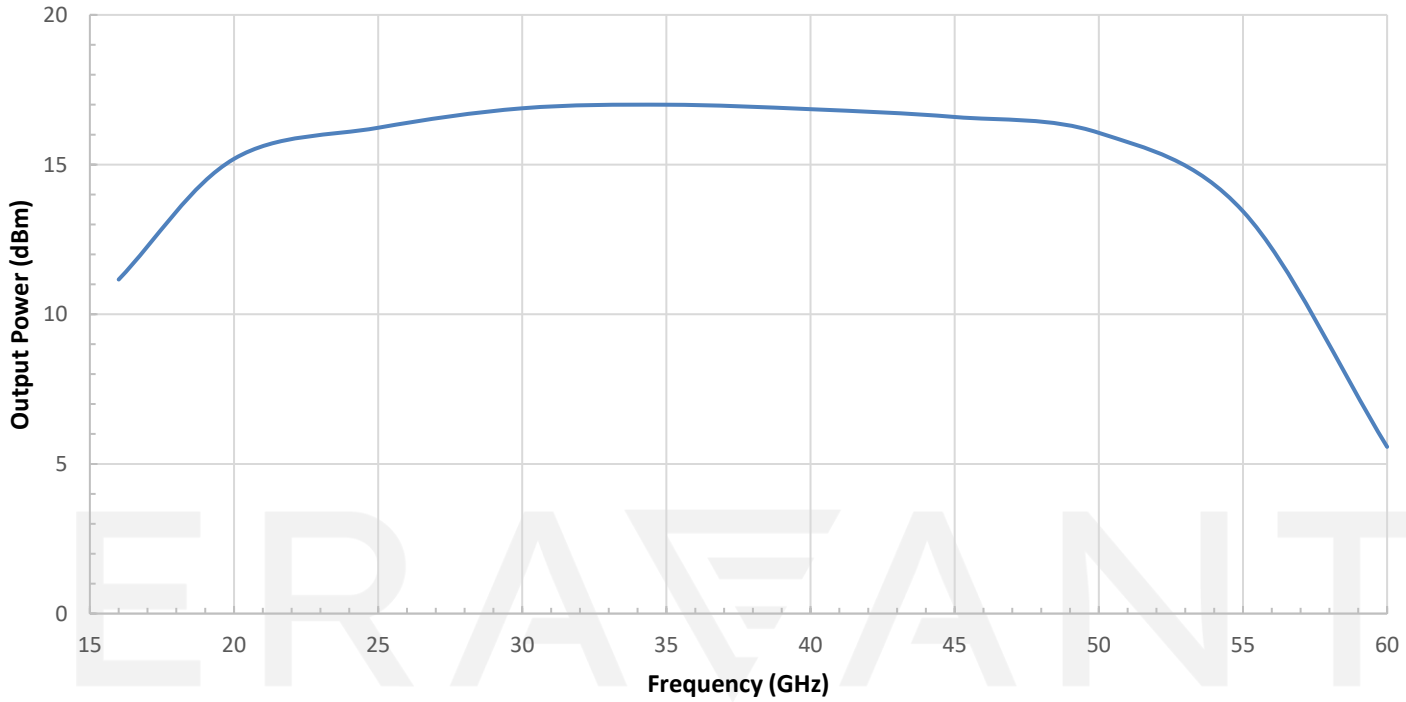
Item	Eravant Model Number	Quantity
SMA Connector Torque Wrench	SCH-08008-S1	1
AC-to-DC Power Adapter	STU-110006005-HF	1

Connecting Cables are not included. Eravant coaxial cable, model **SCW-SMSM040-F1-A-PM**, is highly recommended. Three (3) cables are required to connect this module with VNA.

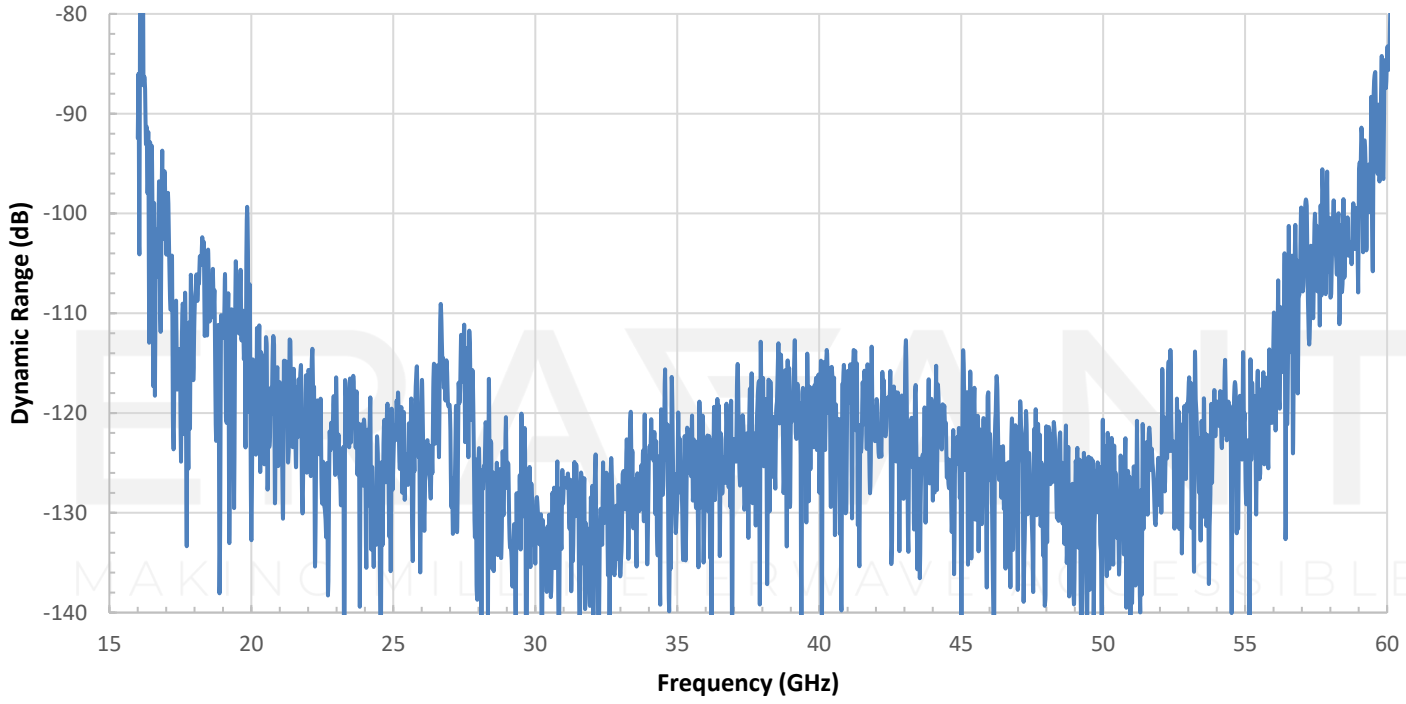
Simplified Block Diagram



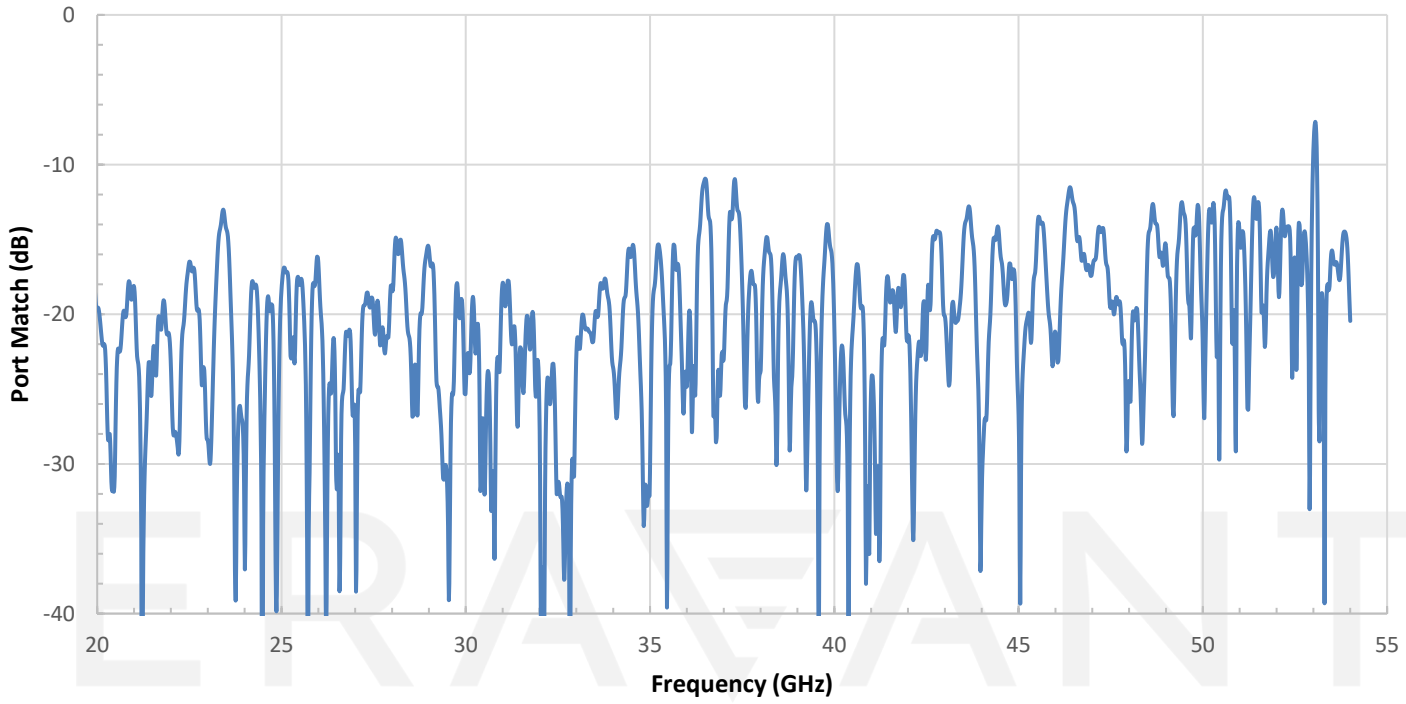
Output Power vs. Frequency



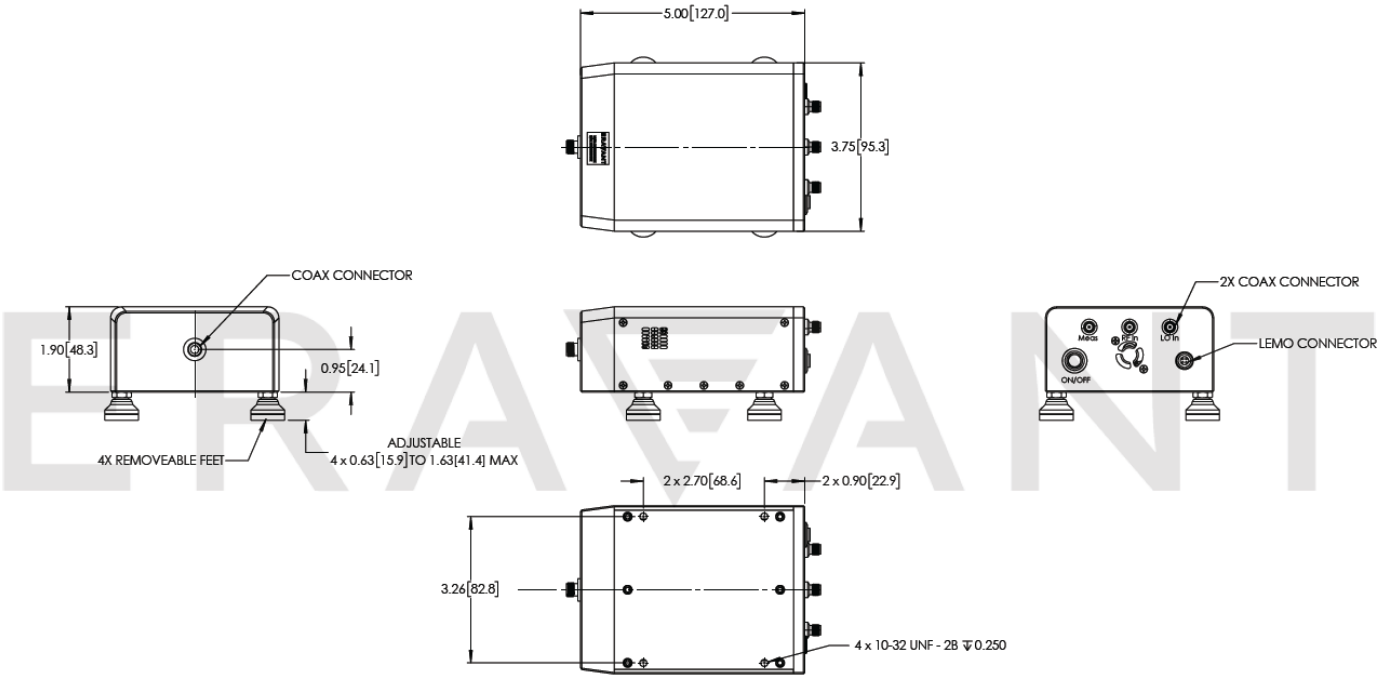
Dynamic Range vs. Frequency



Port Match vs. Frequency



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



FEET REMOVED TO SHOW MOUNTING LOCATIONS

NOTE:

- **To complete a frequency extender test set, pair this Tx/Ref module with a Rx module listed in VNA Frequency Extenders page.**
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings shown will damage the extenders.
- Any foreign objects in the waveguide will cause performance degradation or damage the device.
- **For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.**

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